

Household Analysis Review Group (HARG)**Post-2011 Census Options****1. Purpose**

The results of the 2011 census will be published in the next year, therefore we are starting to consider how they should be incorporated into the household estimates and projections for 2012 and beyond. The initial options that we are considering are detailed below.

2. Household Estimates

Data on the number of households from the 2001 census is used to adjust local authority level household estimates to account for differences between the census definition of a household and council tax data on occupied dwellings. National Records of Scotland (NRS) will consider how to incorporate 2011 census data into future household estimates and discuss this with Household Analysis Review Group (HARG) members at the next meeting.

3. Household Projections**3.1 Headship rates**

Data from the 1991 and 2001 census is currently used to project the headship rates for the household projections, using a modified two-point exponential equation. The data that is used is 'Head of Household' (HoH) by local authority, age and household type. Following release of household information from the 2011 census the following options are available.

Continue with current methodology

Continue the current methodology but project headship rates using 2001 and 2011 census data on HoH. Another variant of this would be to replace only latest data, so that the projections are based on 1991 and 2011 head of household data.

Change from using Head Of Household to Household Reference Person

The person defined as HoH is usually the first adult on the census form, irrespective of any other characteristics of that person, or the other people in that household. This can lead to inconsistencies between censuses, for example a higher proportion of women in households were recorded as first person in 1991 than in 1981, resulting in a spurious increase in the projected headship rates for married women, compensated for by a decrease in households headed by married men. In the 2001 census, Household Reference Person (HRP) was introduced as an alternative, defined, where there is more than one adult for each household, by the most economic activity (e.g. full-time work > part-time work > unemployed > retired) and, if the economic activity is the same, age (the elder is the HRP).

Once 2011 census data is published HRP will be available for all households for two censuses (2001 and 2011)¹, meaning that we could move to estimating headship

Footnote

- 1) Some HRP information is available from the 1991 census, however HRP was only calculated from a 10% sample therefore it was previously decided that this would not be robust enough to use in the household projections following the 2001 census.

rates on the basis of HRP rather than HoH, using the same modified two-point exponential equation. This would mean that the projections would be less vulnerable to the effects of inconsistencies like that described above.

There are other alternatives to the 'head of household' which we could consider, such as using 'household membership rates', which are used in the household projections produced in Northern Ireland and Wales.

Incorporating more data points into the projections

Following the release of the 2001 census data producing headship rate projections on the basis of more than two years of census data was investigated, in order to incorporate more long term information on trends. There are several different strategies for doing this, although they proved challenging to program in 2001. It would be possible to revisit these strategies to incorporate the 2011 census data as well as the existing 2001 and 1991 data. A disadvantage of using techniques that incorporate more than two data points would be that we do not have more than two data points for HRP, meaning that we would have to continue to use HoH as a basis for the headship rate projections.

Another issue is that some local authorities (and others) produce their own household projections, usually using POPGROUP or their own software. They project data from two censuses; if we changed to a much more complicated methodology incorporating the results from three censuses, it would probably mean that these other projections would be less comparable with the NRS projections.

3.2 Communal establishment estimates

In recent years we have estimated residents in communal establishments from administrative sources where possible, as it was felt that it was no longer appropriate to carry forward estimates from the 2001 census. Following release of 2011 census data on communal establishments we will compare this data to our communal establishment estimates and decide whether it will be most appropriate to use census data, or administrative data, for the next household projections.

4. Conclusion

We will continue to investigate the options for incorporating 2011 census data into the household estimates and projections, particularly once this data becomes available. HARG members are asked whether they are happy with these options described and whether there are additional possibilities that we should take into consideration. In particular, we would be interested to know your thoughts on whether we should consider changes to the household projections methodology, once the 2011 census results become available.

NRS: Household estimates and projections branch
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